

CLAIMS

I Claim:

5 1. A digital pressure display comprising:

(a) sensor means for sensing said pressure;

10 (b) microprocessor means for enable said sensor means to sense said pressure and generate a signal;

(c) and power means

for generating a digital pressure reading.

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2. A digital pressure display as claimed in claim 1 wherein said microprocessor means intermittently enables said sensor means to sense said pressure and generate said signal.

20 3. A digital pressure display as claimed in claim 2 wherein said power means comprises a battery.

4. A digital pressure display as claimed in claim 3 wherein said battery is rechargeable.

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5. A digital pressure display as claimed in claim 1 further including a light sensor for sensing a dark condition so as to terminate the generation of said digital pressure reading during said dark condition.

30 6. A digital pressure display as claimed in claim 4 further including a light sensor sensing a dark condition so as to terminate the generation of said digital pressure reading during said dark condition.

7. A digital pressure display as claimed in claim 4 including circuitry means having a solar power cell to recharge said battery.

5 8. A digital pressure display as claimed in claim 2 wherein said display is associated with a vacuum regulator for digitally displaying a level of vacuum administered to a patient.

9. A digital pressure display as claimed in claim 8 wherein said digital display is
10 replaceable with a needle dial.

10. A vacuum pressure regulator system for use in association with a vacuum system in which a vacuum is employed for healthcare purposes, for assisting in monitoring and regulating the vacuum pressure, and which vacuum pressure
15 regulator system comprises:

(a) a manual pressure control valve operable by an operator to adjust the treatment vacuum pressure supplied to the patient;

20 (b) a vacuum pressure sensor operable to sense the treatment vacuum pressure for the patient in the system, and to produce a treatment vacuum pressure signal;

25 (c) a sampling circuit operable intermittently by electrical power to sample said pressure signal generated by said pressure sensor at predetermined time intervals and generate sampling signals;

30 (d) an electrically powered pressure display circuit, and digital pressure display, for receiving said sampling signals and generating a visible digital pressure display; and

- (e) a non-mains power supply connected for supplying power both to said sampling circuit for sampling said vacuum sensor, and to said display circuit and said digital display.

- 5 11. A vacuum pressure regulator as claimed in claim 10 and including a no-pressure signal generator for generating at least one no-pressure signal representing an absence of treatment vacuum pressure, and an alarm signal generator, and an alarm responsive thereto, operable in response to a no-pressure signal to generate an alarm.
- 10 12. A vacuum pressure regulator as claimed in claim 11 and wherein said control valve is manually operable to adjust said treatment vacuum pressure so as to maintain a desired level of vacuum pressure.
- 15 13. A vacuum pressure regulator as claimed in claim 12 and wherein said no-pressure signal generator responds to the occlusion of a treatment device connected to a patient and signals an alarm.
- 20 14. A vacuum pressure regulator as claimed in claim 13 and including an operator override control whereby an operator can manually override said pressure control valve and supply full vacuum for treatment of said patient.
- 25 15. A vacuum pressure regulator as claimed in claim 14 and including a control sensor coupled to said manual control, said sensor being connected to said sampling circuit, and being operable to temporarily increase the sampling rate when said control is adjusted.
- 30 16. A vacuum pressure regulator as claimed in claim 15 wherein said control sensor comprises a potentiometer.
- 17. A vacuum pressure regulator system for use in association with a vacuum system in which a vacuum is employed for healthcare purposes, for assisting in

monitoring and regulating the vacuum pressure, and which vacuum pressure regulator system comprises:

- 5 (a) a manual pressure control valve operable by an operator to adjust the treatment vacuum pressure supplied to the patient;
- (b) a vacuum pressure sensor operable to sense the treatment vacuum pressure for the patient in the system, and to produce a treatment vacuum pressure signal;
- 10 (c) a sampling circuit operable intermittently by electrical power to sample said pressure signal generated by said pressure sensor at predetermined time intervals and generate sampling signals;
- 15 (d) an electrically powered pressure display circuit, and digital pressure display, for receiving said sampling signals and generating a visible digital pressure display;
- 20 (e) a non-mains power supply connected for supplying power both to said sampling circuit for sampling said vacuum sensor, and to said display circuit and said digital display;
- (f) a no-pressure signal generator for generating at least one no-pressure signal representing an absence of treatment vacuum pressure, and an alarm signal generator;
- 25 (g) an operator override control whereby an operator can manually override said pressure control valve and supply full vacuum for treatment of said patient;
- 30 (h) a sensor coupled to said manual control, said sensor being connected to said sampling circuit, and being operable to temporarily increase the sampling rate when said control is adjusted.